

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of
Daniel Willem Elisabeth SCHOBBEN, et al.

Atty. Docket: 2004P00584WOUS

Serial No. 10/598,836

Confirmation No. 1011

Filed: September 13, 2006

Group Art Unit: 2629

Title: SCANNING DISPLAY APPARATUS

Examiner: XIAO, Ke

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Board of Patent Appeals and Interferences
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

Appellants herewith respectfully present a Brief on Appeal as follows, where a Notice of Appeal is concurrently filed, having paid the Notice of Appeal fee on December 10, 2009:

REAL PARTY IN INTEREST

The real party in interest in this appeal is the assignee of record Koninklijke Philips Electronics N.V., a corporation of The Netherlands having an office and a place of business at Groenewoudseweg 1, Eindhoven, Netherlands 5621 BA.

RELATED APPEALS AND INTERFERENCES

Appellants and the undersigned attorney are not aware of any other appeals or interferences which will directly affect or be directly affected by or having a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

Claims 1-5, 8-21 and 23-26 are pending in this application where claims 6-7 and 22 are canceled. Claims 1-5, 8-21 and 23-26 are at least twice rejected, lastly in an Office Action dated January 11, 2012. Claims 1-5, 8-21 and 23-26 are the subject of this appeal.

STATUS OF AMENDMENTS

Appellants did not file a Response to an Office Action dated January 11, 2012. This Appeal Brief is in response to the Office Action of January 11, 2012 that rejected claims 1-5, 8-21 and 23-26 which have been at least twice rejected.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention, for example, as recited in independent claim 1, shown in FIGs 1-3, and described on page 3, lines 6-32; and page 7, line 11 to page 10, line 33 of the specification, is directed to a scanning display apparatus 10 comprising a display 70 operable to receive one or more driver signals and generate corresponding visual information for presentation on the display 70; and to sense radiation received at the display 70 and generate one or more sensing signals corresponding to a region proximate to the display 70. The scanning display apparatus 10 further includes computer hardware coupled to the display for generating the one or more driver signals for the display and for receiving the one or more sensing signals from the display 70, the computer hardware being operable to provide an interactive user interface at the display 70. As shown in FIGs 4-6, and described on page 10, lines 21-33 and page 11, lines 1-26, the apparatus 10 is configured to sense one or more objects when placed upon or positioned in proximity to the display 70 and obscuring at least part of the visual information displayed on the display 70, and in response to sensing the one or more objects obscuring the at least part of the visual information displayed on the display 70, to adapt the visual information for display on unobscured parts of the display 70 which are unobscured by the one or more objects by moving the at least part of the visual information from obscured parts of the display 70 to the unobscured parts of the display for displaying substantially all the visual information on the unobscured parts without changing a size of the visual information displayed on the display 70.

The present invention, for example, as recited in independent claim 11, shown in FIGs 1-3, and described on page 3, lines 6-32; and page 7, lines 11 page 10, line 33 of the specification, is directed to a scanning display apparatus 10 comprising a display 70 operable to receive one or more driver signals and generate corresponding visual information for presentation on the display 70; and to sense radiation received at the display 70 and generate one or more sensing signals corresponding to a region proximate to the display 70. The scanning display apparatus 10 further comprises computer hardware coupled to the display 70 for generating the one or more driver signals for the display 70 and for receiving the one or more sensing signals from the display 70, the computer hardware being operable to provide an interactive user interface at the display. As shown in FIGs 4-6, and described on page 4, line 30 to page 4, line 2; and page 9, line 32 to page 10, line 33 and page 11, lines 1-26, the apparatus 10 is arranged to present the user interface comprising a plurality of user interface features, and the computer hardware is provided with a priority identifier for each of the features for determining which of the features to omit from presentation in the user interface in a situation where at least part of the display 70 is obscured, where the apparatus 10 is further arranged, in response to detecting that the at least part of the display 70 is obscured, to move at least part of the visual information from the at least part of the display which is obscured to unobscured parts of the display 70 without changing a size of the visual information displayed on the display 70.

The present invention, for example, as recited in independent claim 16, shown in FIGs 1-3 and 5-7, and described on page 3, lines 6-32; page 6, lines 11-26; page 7, lines 11 page 10, line 33; and page 14, line 16, to page 15, line 19 of the specification, is directed to a method of operating a scanning display apparatus 10 including a display 70, where the method includes receiving one or more driver signals at the display 70 and generating corresponding visual information for presentation on the display 70; and sensing radiation received at the display 70 and generating one or more corresponding sensing signals corresponding to a region proximate to the display 70. Computer hardware coupled to the display 70 generates the one or more driver signals for the display 70 and receives the one or more sensing signals from the display 70. As shown in FIGs 4-6, and described on page 4, line 30 to page 4, line 2; and page 9, line 32 to page 10, line 33 and page 11, lines 1-26, the method further includes sensing one or more objects when placed upon or positioned in proximity to the display 70 and, in response to sensing the one or more objects obscuring the at least part of the visual information displayed on the display, adapting the visual information for display 70 on unobscured parts of the display which are unobscured by the one or more objects by moving the at least part of the visual information from obscured parts of the display 70 to the unobscured parts of the display 70 for displaying substantially all the visual information on the unobscured parts without changing a size of the visual information displayed on the display 70, the computer hardware being operable to provide an interactive user interface at the display 70.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1, 3, 8-10, 12 and 14-19 of U.S. Patent Application Serial No. 10/598,836 are unpatentable under 35 U.S.C. §103(a) over U.S. Patent Application Publication No. 2002/0079512 (Yamazaki) in view of U.S. Patent Application Publication No. 2001/0020939 (Ikeda), U.S. Patent Application Publication No. 2005/0179653 (Hamon) and U.S. Patent No. 7,289,102 (Hinckley).

Whether claim 2 of U.S. Patent Application Serial No. 10/598,836 is unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Hamon, Hinckley and U.S. Patent No. 5,610,629 (Baur).

Whether claim 4 of U.S. Patent Application Serial No. 10/598,836 is unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Hamon, Hinckley and U.S. Patent No. 6,429,857 (Masters).

Whether claim 5 of U.S. Patent Application Serial No. 10/598,836 is unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Hamon, Hinckley and U.S. Patent No. 5,742,279 (Yamamoto).

Whether claim 13 of U.S. Patent Application Serial No. 10/598,836 is unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Hamon, Hinckley and WO 00/75766 (Macinnes).

Whether claim 20 of U.S. Patent Application Serial No. 10/598,836 is unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Hamon, Hinckley, Masters and

Baur.

Whether claims 21 and 26 of U.S. Patent Application Serial No. 10/598,836 is unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Hamon, Hinckley and U.S. Patent Application Publication No. 2001/0030644 (Allport).

Whether claims 23-25 of U.S. Patent Application Serial No. 10/598,836 is unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Hamon, Hinckley, Allport and U.S. Patent No. 6,788,293 (Silverbrook).

Whether claim 11 of U.S. Patent Application Serial No. 10/598,836 is unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, U.S. Patent Application Publication No. 2004/0117735 (Breen) and Hinckley.

ARGUMENT

Claims 1, 3, 8-10, 12 and 14-19 are said to be unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Hamon and Hinckley.

Appellants respectfully request the Board to address the patentability of independent claims 1, 11 and 16, and further claims 2-5, 8-10, 12-15, 17-21 and 23-26 as depending from claims 1, 11 and 16, based on the requirements of independent claims 1, 11 and 16. This position is provided for the specific and stated purpose of simplifying the current issues on appeal. However, Appellants herein specifically reserve the right to argue and address the patentability of claims 2-5, 8-10, 12-15, 17-21 and 23-26 at a later date should the separately patentable subject matter of claims 2-5, 8-10, 12-15, 17-21 and 23-26 later become an issue. Accordingly, this limitation of the subject matter presented for appeal herein, specifically limited to discussions of the patentability of claims 1, 11 and 16 is not intended as a waiver of Appellants' right to argue the patentability of the further claims and claim elements at that later time.

Yamazaki is directed to an information device with a pen input function. Ikeda is directed to an electronic instrument which can reduce its power consumption. Hamon is directed to a display having a detector to detect the presence of a device that obscures at least part of the viewable area of the display, and a display control element to modify the viewable area when the presence of such a device is detected, as recited in the Abstract. As clearly shown in FIGs 4-5, when a keyboard 17 is placed on the screen 12, the

displayed content is re-sized to fit the smaller presentation area of the screen 12, namely, to by reducing the size of the displayed content.

As correctly noted on page 4, first full paragraph of the Final Office Action, Yamazaki, Ikeda and Hamon do not disclose or suggest moving part of the visual information from obscured parts of the display to the unobscured parts without changing a size of the visual information displayed on the display. Hinckley is cited in an attempt to remedy the deficiencies in Yamazaki, Ikeda and Hamon.

Hinckley is directed to a display with multiple sensors for generating context values that indicate how the device is situated. FIGs 10 and 11 referred to on page 4, first full paragraph of the Final Office Action, show portrait and landscape orientations of a mobile device, where the text having the same size is displayed in the SAME display area, where no portion of the display area is obscured.

It is respectfully submitted that Yamazaki, Ikeda, Hamon, Hinckley, and combinations thereof, do not disclose or suggest the present invention as recited in independent claim 1, and similarly recited in independent claim 11 and claim 16, amongst other patentable elements recites (illustrative emphasis provided):

wherein the apparatus is configured to sense one or more objects when placed upon or positioned in proximity to the display and obscuring at least part of the visual information displayed on the display, and in response to sensing the one or more objects obscuring at least part of the visual information displayed on the display, to adapt the visual information for display on unobscured parts of the display which are unobscured by the one or more objects by moving the at least part of the visual information from obscured parts of the display to the unobscured parts of the display for displaying substantially all the visual information

on the unobscured parts **without changing a size** of the visual information displayed on the display.

Moving information from obscured parts of the display to the unobscured parts of the display without changing a size of the visual information displayed on the display, in response to sensing an object obscuring part of the visual information displayed on the display, is nowhere disclosed or suggested in Yamazaki, Ikeda, Hamon, Hinckley, and combination thereof. While Hinckley discloses re-orienting displayed text between portrait and landscape orientations without changing size of the text, any such re-orienting the displayed text is not in response to sensing display obstruction, and instead is in response to detecting a change in orientation of the mobile device display.

Hinckley has nothing to do with any object obstructing a portion of the display, or detecting any such object. In Hinckley, no portion of the display is obscured, and the same information is displayed but with different orientation, as shown in FIGs 10-11 of Hinckley.

At best, the combination of Yamazaki, Ikeda, Hamon and Hinckley, discloses or suggests reducing the size of the displayed content in response to detecting an obstruction or a keyboard placed on a screen; and displaying the same information in response to detecting a change in the orientation of the display, and not in response to detecting any obstruction.

Accordingly, it is respectfully submitted that independent claims 1 and 16 are allowable, and allowance thereof is respectfully requested. In addition, it is respectfully submitted that claims 3, 8-10, 12, 14-15, 17-19, 21 and 23-26 are also allowable at least

based on their dependence from amended independent claims 1 and 16.

In addition, Yamazaki, Ikeda, Hamon and Hinckley, and combinations thereof, do not disclose or suggest the features of claims 20 and 23. In particular, claim 21 specifically recites "to determine an identity of a user from detection of the one or more objects, and to present preferred visual information preferred by the user," and claim 23 specifically recites "to present the preferred visual information preferred by the user for a duration the one or more objects is in proximity of the display." (Illustrative emphasis provided) Portions of Yamazaki cited on page 7, second and third full paragraphs of the Final Office Action, namely, FIG 21A and paragraphs [0397]-[0400], do not even disclose or suggest presenting any information for the duration when an object is in proximity of the display, let alone disclosing or suggesting presenting any preferred information, preferred by the user, for the duration when the object is in proximity of the display, as recited in claims 21 and 23. Rather, the noted portions of Yamazaki merely disclose identifying a user by reading the user's palm print when placed near the display. Accordingly, it is respectfully submitted that claims 21 and 23 are allowable, and allowance thereof is respectfully requested.

Claim 2 is said to be unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Hamon, Hinckley and Baur.

It is respectfully submitted that claim 2 should be allowed at least based on its dependence from independent claim 1.

Claim 4 is said to be unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Hamon, Hinckley and Masters.

It is respectfully submitted that claim 4 should be allowed at least based on its dependence from independent claim 1.

Claim 5 is said to be unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Hamon, Hinckley and Yamamoto.

It is respectfully submitted that claim 5 should be allowed at least based on its dependence from independent claim 1.

Claim 13 is said to be unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Hamon, Hinckley and MacInnes.

It is respectfully submitted that claim 13 should be allowed at least based on its dependence from independent claim 1.

Claim 20 is said to be unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Hamon, Hinckley, Masters and Baur.

It is respectfully submitted that claim 20 should be allowed at least based on its dependence from independent claim 1.

Claims 21 and 26 are said to be unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Hamon, Hinckley and Allport.

It is respectfully submitted that claims 21 and 26 should be allowed at least based on their dependence from independent claim 1.

Claims 23-25 are said to be unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Hamon, Hinckley, Allport and Silverbrook.

It is respectfully submitted that claims 23-25 should be allowed at least based on their dependence from independent claim 1.

Claim 11 is said to be unpatentable under 35 U.S.C. §103(a) over Yamazaki in view of Ikeda, Breen and Hinckley.

On page 14, last paragraph of the Final Office Action, the Examiner correctly noted that Yamazaki, Ikeda and Breen do not disclose or suggest "the apparatus being further arranged, in response to detecting that the at least part of the display is obscured, to move at least part of the visual information from the at least part of the display which is obscured to unobscured parts of the display without changing a size of the visual information displayed on the display," as recited in independent claim 11. FIGs 10 and 11 of Hinckley are cited in an attempt to remedy the deficiencies in Yamazaki, Ikeda and Breen.

As discussed above in connection with the arguments related to independent claims 1 and 16, Hinckley has nothing to do with any object obstructing a portion of the display, or

detecting any such object. In Hinckley, no portion of the display is obscured, and the same information is displayed but with different orientation, as shown in FIGs 10-11 of Hinckley.

At best, the combination of Yamazaki, Ikeda, Breen and Hinckley, discloses or suggests reducing the size of the displayed content in response to detecting an obstruction or a keyboard placed on a screen; and displaying the same information in response to detecting a change in the orientation of the display, and not in response to detecting any obstruction. Accordingly, it is respectfully submitted that independent claim 11 is allowable, and allowance thereof is respectfully requested.

In addition, Appellants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, Appellant reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

CONCLUSION

Claims 1-5, 8-21 and 23-26 are patentable over Yamazaki, Ikeda, Hamon, Hinckley, Baur, Masters, Yamamoto, Macinnes, Allport, Silverbrook and Breen.

Thus, the Examiner's rejections of claims 1-5, 8-21 and 23-26 should be reversed.

Respectfully submitted,

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CLAIMS APPENDIX

1.(Previously Presented) A scanning display apparatus comprising:

(a) a display operable:

(i) to receive one or more driver signals and generate corresponding visual information for presentation on the display; and

(ii) to sense radiation received at the display and generate one or more sensing signals corresponding to a region proximate to the display; and

(b) computer hardware coupled to the display for generating the one or more driver signals for the display and for receiving the one or more sensing signals from the display, the computer hardware being operable to provide an interactive user interface at the display;

wherein the apparatus is configured to sense one or more objects when placed upon or positioned in proximity to the display and obscuring at least part of the visual information displayed on the display, and in response to sensing the one or more objects obscuring the at least part of the visual information displayed on the display, to adapt the visual information for display on unobscured parts of the display which are unobscured by the one or more objects by moving the at least part of the visual information from obscured parts of the display to the unobscured parts of the display for displaying substantially all the visual information on the unobscured parts without changing a size of the visual information

displayed on the display.

2.(Previously Presented) The apparatus according to claim 1, the apparatus being arranged to identify positions of the one or more objects placed in proximity of the display by way of ambient illumination to the apparatus obscured by the one or more objects.

3.(Previously Presented) The apparatus according to claim 1, wherein the display is operable to generate light radiation for illuminating the one or more objects placed in proximity to or on the display, and also for receiving at least part of the light radiation reflected from the one or more objects so as to enable the apparatus to assimilate a scanned image of the one or more objects.

4.(Previously Presented) The apparatus according to claim 1, wherein the computer hardware is operable to execute a first coarser scan to determine spatial location of the one or more objects on or in proximity of the display, and then execute a second finer scan to assimilate finer details of the one or more objects.

5.(Previously Presented) The apparatus according to claim 4, wherein the computer hardware is operable to present a representation of the one or more objects in a region of the display in which the one or more objects were placed during scanning as confirmation of successfully completed scanning.

Claims 6-7 (Canceled)

8.(Previously Presented) The apparatus according to claim 1, arranged to present the user interface in squeezed format when the unobscured parts of the display is insufficiently large to include all of the user interface.

9.(Previously Presented) The apparatus according to claim 8, wherein the user interface includes a scrolling feature for use in accessing squeezed parts of the user interface presented on the display.

10.(Previously Presented) The apparatus according to claim 1, wherein a minimum display size limit for the user interface is defined in the computer hardware, such that obscuring more of the display than defined by the display size limit causes the computer hardware to present at least part of the user interface in a squeezed format.

11.(Previously Presented) A scanning display apparatus comprising:

(a) a display operable:

(i) to receive one or more driver signals and generate corresponding visual information for presentation on the display; and

(ii) to sense radiation received at the display and generate one or more

sensing signals corresponding to a region proximate to the display; and

(b) computer hardware coupled to the display for generating the one or more driver signals for the display and for receiving the one or more sensing signals from the display, the computer hardware being operable to provide an interactive user interface at the display;

the apparatus being arranged to present the user interface comprising a plurality of user interface features, the computer hardware being provided with a priority identifier for each of the features for determining which of the features to omit from presentation in the user interface in a situation where at least part of the display is obscured,

the apparatus being further arranged, in response to detecting that the at least part of the display is obscured, to move at least part of the visual information from the at least part of the display which is obscured to unobscured parts of the display without changing a size of the visual information displayed on the display.

12.(Previously Presented) The apparatus according to claim 1, wherein the computer hardware in conjunction with the display is operable to identify the one or more objects in proximity to or in contact with the display and invoke one or more corresponding software applications for executing in the computer hardware in response to placement of the one or more objects.

13.(Previously Presented) The apparatus according to claim 12, wherein the one or

more software applications are operable to generate one or more animated icons on the display which appear in surrounding spatial proximity to the one or more objects placed on the display, thereby providing a visual acknowledgement that the computer hardware has identified presence of the one or more objects.

14.(Previously Presented) The apparatus according to claim 1, wherein the display comprises one or more pixel devices capable of both:

- (a) generating or transmitting illumination; and
- (b) sensing illuminating incident thereupon, the one or more pixel devices being fabricated using one or more of:
 - (c) liquid crystal display devices with associated thin-film-transistors configured to function as a light sensor; and
 - (d) polyLED technology.

15.(Previously Presented) The apparatus according to claim 1 adapted for use in one or more of the following applications:

- (a) a contact type scanner;
- (b) webtables;
- (c) interactive tables;
- (d) automatic vending machines control panels;
- (e) security access panels;

- (f) interactive control panels in vehicles;
- (g) electronic design drawing boards;
- (h) interactive advertisement or information displays;
- (i) childrens' interactive toys and games;
- (j) teaching aids;
- (k) television monitors; and
- (l) computer monitors.

16.(Previously Presented) A method of operating a scanning display apparatus including:

(a) a display, wherein the method includes acts of:

(i) receiving one or more driver signals at the display and generating corresponding visual information for presentation on the display; and

(ii) sensing radiation received at the display and generating one or more corresponding sensing signals corresponding to a region proximate to the display; and

(b) in computer hardware coupled to the display, generating the one or more driver signals for the display and receiving the one or more sensing signals from the display, sensing one or more objects when placed upon or positioned in proximity to the display and obscuring at least part of the visual information displayed on the display, and in response to sensing the one or more objects obscuring the at least part of the visual information displayed on the display, adapting the visual information for display on unobscured parts of

the display which are unobscured by the one or more objects by moving the at least part of the visual information from obscured parts of the display to the unobscured parts of the display for displaying substantially all the visual information on the unobscured parts without changing a size of the visual information displayed on the display, the computer hardware being operable to provide an interactive user interface at the display.

17.(Previously Presented) The method according to claim 16, further comprising an act of using pixel devices of the display to generate light radiation for illuminating the one or more objects placed in proximity to or on the display, and also for receiving at least part of the light radiation reflected from the one or more objects so as to enable the apparatus to assimilate a scanned image of the one or more objects.

18.(Previously Presented) The scanning display apparatus of claim 1, wherein the visual information is adapted so that all the visual information are displayed on the unobscured parts.

19.(Previously Presented) The scanning display apparatus of claim 1, wherein the computer hardware is configured to form a halo surrounding a footprint of the one or more objects to provide an indication of sensing the one or more objects, and wherein the computer hardware is configured to remove the halo upon removal of the one or more objects from the proximity of the display.

20.(Previously Presented) The scanning display apparatus of claim 1, wherein the computer hardware is configured to perform a coarse scan using ambient illumination to identify positions of the one or more objects and to perform a fine scan, which is finer than the coarse scan, to identify details of the one or more objects using illumination generated by the display.

21.(Previously Presented) The scanning display apparatus of claim 1, wherein the computer hardware is configured to determine an identity of a user from detection of the one or more objects, and to present preferred visual information preferred by the user.

22.(Canceled)

23.(Previously Presented) The apparatus of claim 21, wherein the computer hardware is further configured to present the preferred visual information preferred by the user for a duration the one or more objects is in proximity of the display.

24.(Previously Presented) The apparatus of claim 21, wherein the computer hardware is further configured to determine an orientation of the one or more objects and to orient the preferred visual information based on the orientation of the one or more objects.

25.(Previously Presented) The apparatus of claim 21, wherein the computer hardware is further configured to recognize presence of different users and display corresponding documents preferred by the different users based on identifying the one or more objects.

26.(Previously Presented) The apparatus of claim 1, wherein the computer hardware is further configured to associate different users with the one or more objects so that placing an object upon or positioning the object in proximity to the display indicates which user of the different users is presently using the apparatus, the computer hardware being further configured to display a document preferred by the user in response to placing the object upon or positioning the object in proximity to the display.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None